

Notice of Allowability

Application No.

10/689,804

Examiner

Steven B. Theriault

Applicant(s)

SANDERS ET AL.

Art Unit

2179

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 09/11/2006.
2. ☒ The allowed claim(s) is/are 5-24, 68-81, 84, 85 and 90-99.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date 09/06
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material

5. ☐ Notice of Informal Patent Application
6. ☐ Interview Summary (PTO-413),
Paper No./Mail Date _____
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____

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PRIMARY EXAMINER

EXAMINER'S AMENDMENT

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with William Bahret on 11/20/2006.

In the Claims, please amend the claims as attached:(The application has been amended by applicant and sent to examiner via fax).

Affidavit under Rule 1.132

The affidavit under 37 CFR 1.132 filed 09/11/2006 had been considered and has been entered but is considered moot in view of the claim amendments.

Allowable Subject Matter

1. Claims 5-24, 68-81, 84-85, 90-99 are allowed.
2. The following is an examiner's statement of reasons for allowance:

Claims 5,68,75,84,95 and 96:

The closest prior art of Katsurabayashi et al (hereinafter Katsurabayashi) U.S. Patent No. 5,996,002, Katsurabayashi teaches a network of computers connected together for the purpose of group collaboration where the users can switch the computer to have private and public spaces on their desktop (Katsurabayashi Fig. 1, 2, 3, 4A and column 9, lines 5-35). Katsurabayashi teaches an individual can retain the permission to update the public area while all other participants would not have the permission to update the public area. A user can toggle the shared and public space to vary access rights to the spaces (Katsurabayashi fig.4a-4b and column 9, lines 5-15). Katsurabayashi attempts to solve the problem of storing annotations and information from a recorded session and creates means for playing the session back for the new or prior participants of the session where the information was lost in prior applications.

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Katsurabayashi solves the problem by creating data structures that log every interaction and data type into a shared data location in which the time stamps of the entries can be replayed for the user via the application. Katsurabayashi does not expressly teach a client/server system with a database that transmits the object to the moderator when the object is completely drawn.

The prior art of Mattaway et al. (hereinafter Mattaway) U.S. Patent No. 6,728,784 teaches a collaboration system that allows users to store information in a public and private workspaces along with a moderator work area where the purpose of the application is to let peer to peer applications that communicate primarily on a dedicated network to communicate in a networked environment complete with servers and databases in an NT/server environment (see column 4, lines 1-67). Mattaway does not teach a mechanism to wait until the object is drawn before sending the object to the moderator work area as is recited in the amended claims.

Therefore, in light of the applicant's amendment and arguments, the prior art of Katsurabayashi in view of Mattaway do not teach or suggest the combined limitations of the amended claims as submitted. Therefore, the claims as amended are allowable.

Claims 6-24, 69-81, 85-94, 97-99

These claims are dependent upon claims 5, 68, 75, 84, 95 and 96, respectively, and are thus allowable.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Steven B. Theriault whose telephone number is (571) 272-5867. The examiner can normally be reached on M-F 7:30 - 4:00 PM.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Weilun Lo can be reached on (571) 272-4847. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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PRIMARY EXAMINER

CLAIMS

5. A client/server network of computers programmed for knowledge transfer in a group setting, the client/server network comprising:

at least one server containing a database; and

a plurality of clients including participant workstations and at least one moderator workstation,

each participant workstation programmed to provide a participant work area and having at least one corresponding participant input-device, and each of the participant input-devices being adapted to create data structures defining participant images that are then included in the participant work area, each participant workstation being programmed to send data structures defining participant images to the database on the at least one server and to retrieve moderator images from the database and include them in the participant work area;

each moderator workstation programmed to provide a moderator work area and comprising at least one moderator input-device, the at least one moderator input-device being adapted to create data structures defining moderator images that are then included on the moderator work area, the moderator workstation programmed to send the data structures defining the moderator images to the database on the at least one server, wherein the data structures are stored in the database, and to retrieve participant images from the database from any selected one of the plurality of participant work areas and include the selected participant images on the moderator work area, wherein the moderator workstation is adapted to transmit an object drawn by the moderator when the object is complete.

6. The network of claim 5, wherein the moderator work area comprises a main layer, a moderator layer, a first participant layer, and a background layer.

7. The network of claim 6, wherein each participant's work station displays a participant's main layer, the participant's main layer being a composite of the moderator layer, the background layer, a second participant layer.

8. The network of claim 5, wherein the network can be used in a group mode and a standalone mode.

9. The network of claim 5, wherein the workstations are located such that a first user positioned to use a workstation and a second user positioned to use a different workstation can hear each other speak.

10. The network of claim 9, wherein every user positioned to use a workstation can hear every other user positioned to use any other workstation.

11. The network of claim 5, wherein no user positioned to use a workstation can hear any other user positioned to use a different workstation.

12. The network of claim 5, wherein images are organized in notebook data structures comprising at least one panel.

13. The network of claim 12, wherein the images are stored as at least one object in a single panel.

14. The network of claim 5, wherein images placed on a participant's work area at a participant workstation may be viewed only at that workstation unless an instruction to permit the images to be viewed from another workstation is given at the participant workstation providing the participant's work area.

15. The network of claim 14, wherein the instruction to permit the images to be viewed from another workstation actively causes data structures corresponding to the images to be transmitted to another workstation.

16. The network of claim 5, further comprising collision-correction functionality.

17. The network of claim 16, wherein the collision-correction functionality comprises functionality permitting toggling between a plurality of view modes.

18. The network of claim 16, wherein the collision-correction functionality comprises functionality permitting relocation of images on the participant work area.

19. The network of claim 18, wherein the relocation of images occurs automatically when a collision occurs.

20. The network of claim 5, further comprising collision-avoidance functionality.

21. The network of claim 20, wherein the collision-avoidance functionality comprises a margin that does not have a corresponding location of the shared work area.

22. The network of claim 20, wherein the collision-avoidance functionality comprises functionality that permits the participant to place footnote images on the participant work area that provide a link between the footnote images and corresponding images placed on a portion of the participant work area that is not superimposed on the shared work area.

23. The network of claim 20, wherein the collision-avoidance functionality comprises functionality that permits the participant to place footnote images in the participant public work area, the footnote images providing a link to corresponding images located elsewhere.

24. The network of claim 23, wherein the participant work area comprises a virtual drawing surface, the virtual drawing surface comprising a main layer, a moderator layer, a background layer, and a participant layer having a margin that does not overlap with either of the moderator layer and the background layer, wherein the corresponding images are placed on the margin on the participant layer.

68. A network of computers programmed for knowledge transfer in a group setting, the network comprising:

- at least one server containing a database;

- a plurality of participant workstations, each programmed to provide a participant work area and having at least one corresponding participant input-device, each of the participant input-devices being adapted to create data structures defining participant images that are then included on the participant work area;

- a moderator workstation, programmed to provide a moderator work area and comprising at least one moderator input-device, the at least one moderator input-device being adapted to:

- create data structures defining moderator images that are then included on the moderator work area, and

- select moderator images that are then simultaneously included on each of the plurality of participant work areas; and

- collision-avoidance functionality that permits a participant to place footnote images on the participant work area that provide a link between the footnote images and corresponding images located elsewhere;

- wherein the data structures are stored in the database;

- wherein the moderator work area comprises a main layer, a moderator layer, a participant layer, and a background layer;

- wherein each participant work area comprises:

- a main layer;

- a participant layer;

- a moderator layer common to the moderator work area; and

- a background layer common to the moderator work area;

- wherein the moderator input-device is further adapted to select participant layers from any of the plurality of participant work areas that are then copied to the participant layer on the moderator's virtual drawing surface; and

- wherein a participant layer may only be selected to be copied to the participant layer on the moderator's virtual drawing surface after an instruction has been given at the participant workstation upon which the participant layer resides.

69. The network of claim 68, further comprising collision-correction functionality permitting toggling between a plurality of view modes.

70. The network of claim 69, wherein the plurality of view modes includes at least one member from the set consisting of:

- a) a mode in which the moderator layer is displayed;
- b) a mode in which the background layer is displayed;
- c) a mode in which the participant layer is displayed.

71. The network of claim 68, further comprising collision-correction functionality permitting relocation of images on the participant work area.

72. The network of claim 71, wherein the relocation of images occurs automatically when a collision occurs.

74. The network of claim 68, wherein the collision-avoidance functionality comprises a margin in the participant layer that does not overlap with either the moderator layer or the background layer.

75. A client/server method of facilitating knowledge transfer in a group setting, comprising:

providing at least one server containing a database;

connecting the at least one server to a plurality of clients including participant

workstations and at least one moderator workstation, each participant workstation comprising:

at least one participant display device;

at least one participant input device; and

a participant virtual drawing surface,

the at least one participant input device being adapted to permit the participant to create data structures defining images on the participant virtual drawing surface that are displayed on the at least one participant display device;

each moderator workstation comprising:
at least one moderator display device;
at least one moderator input-device; and
a moderator virtual drawing surface,
the at least one moderator input device being adapted to create data structures
defining images on the moderator virtual drawing surface that are
displayed on the at least one moderator display device and on each of the
participant display devices;
sending data structures from the moderator workstation to the database on the at least one
server and therefrom to the participant workstations for display on the participant
display devices; and
sending data structures from participant workstations to the database on the at least one
server and therefrom to the moderator workstation;
wherein each moderator workstation is adapted to transmit an object drawn by the
moderator when the object is complete.

76. The method of claim 75, wherein the moderator input-device is further adapted to
select images on any of the plurality of participant virtual drawing surfaces that are then copied
to the moderator virtual drawing surface.

77. The method of claim 76, further comprising the step of making a recording with at
least one member of the set consisting of a video recording device and an audio recording
device.

78. The method of claim 76, wherein a session can be replayed on the moderator display
device and on each of the at least one participant display devices by adding images
corresponding to the data structures to a composite image in the order the data structures were
created.

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79. The method of claim 78, further comprising the step of making a recording with at least one member of the set consisting of a video recording device and an audio recording device.

80. The method of claim 79, wherein the images corresponding to the data structures can be added to the composite image one at a time in response to an instruction.

81. The method of claim 79,
wherein a recording is played back with at least one member of the set consisting of a video playback device and an audio playback device; and
wherein a recording can be played back on the member of the set in synchronization with the data structures, such that the images corresponding to the data structures are added to the composite image at points in time corresponding to the points in the recording where the data structures were created.

84. An interactive learning method facilitating multiple synchronous class sessions, comprising:
providing a client/server architecture including at least one server containing a database;
connecting the at least one server to a plurality of student workstations and an associated teacher workstation in each of a plurality of classes, each student workstation comprising:
at least one student display device;
at least one student input device; and
a student virtual drawing surface,
the at least one student input device being adapted to permit the student to create data structures defining images on the student virtual drawing surface that are displayed on the at least one student display device;
each teacher workstation comprising:
at least one teacher display device;
at least one teacher input-device; and

a teacher virtual drawing surface,
the at least one teacher input device being adapted to create data structures
defining images on the teacher virtual drawing surface that are displayed
on the at least one teacher display device;
sending data structures from the teacher workstation in each class to the database on the
at least one server and therefrom to the student workstations in the respective
classes for display on the student display devices; and
sending data structures from student workstations in each class to the database on the at
least one server and therefrom to the respective teacher workstations;
wherein each teacher workstation is adapted to transmit an object drawn by the teacher
when the object is complete.

85. The method of claim 84, wherein each virtual drawing surface comprises a teacher layer, a student input layer, and a background layer containing at least one object.

90. The client/server network of claim 5, wherein the plurality of clients includes student workstations and an associated teacher workstation in each of a plurality of classrooms, each workstation connected to the at least one server, whereby multiple classroom sessions may be conducted simultaneously via the server.

91. The client/server network of claim 5, wherein said participant workstations include moderator functionality allowing the participants to add images to the moderator work area, whereby multiple users may concurrently serve as moderators making changes to the content of the moderator work area.

92. The client/server network of claim 5, wherein each participant workstation is programmed to synchronize with an ongoing session by retrieving from the database all moderator images created during the session before the participant joined the session.

93. The interactive learning method of claim 84, wherein the student workstations include moderator functionality allowing the students to add images to the teacher virtual drawing surface, whereby multiple users may concurrently serve as moderators making changes to the content of the teacher virtual drawing surface.

94. The interactive learning method of claim 84, wherein each student workstation is programmed to synchronize with an ongoing session by retrieving from the database all images created by the teacher during the session before the student joined the session.

95. A client/server network of computers programmed for knowledge transfer in a group setting, the client/server network comprising:

- at least one server containing a database;

- a plurality of clients including participant workstations and at least one moderator workstation,

- each participant workstation programmed to provide a participant work area and having at least one corresponding participant input-device, and each of the participant input-devices being adapted to create data structures defining participant images that are then included in the participant work area, each participant workstation being programmed to send data structures defining participant images to the database on the at least one server and to retrieve moderator images from the database and include them in the participant work area;

- each moderator workstation programmed to provide a moderator work area and comprising at least one moderator input-device, the at least one moderator input-device being adapted to create data structures defining moderator images that are then included on the moderator work area, the moderator workstation programmed to send the data structures defining the moderator images to the database on the at least one server, wherein the data structures are stored in the database, and to retrieve participant images from the database from any selected one of the plurality of participant work areas and include the selected participant images on the moderator work area; and

collision-avoidance functionality permitting a participant to place a first image in the moderator work area visible to the moderator, the first image having a corresponding image in the participant work area that is not visible to the moderator.

96. A client/server method of facilitating knowledge transfer in a group setting, comprising:
- providing at least one server containing a database;
 - connecting the at least one server to a plurality of clients including participant workstations and at least one moderator workstation, each participant workstation comprising:
 - at least one participant display device;
 - at least one participant input device; and
 - a participant virtual drawing surface,the at least one participant input device being adapted to permit the participant to create data structures defining images on the participant virtual drawing surface that are displayed on the at least one participant display device;
 - each moderator workstation comprising:
 - at least one moderator display device;
 - at least one moderator input-device; and
 - a moderator virtual drawing surface,the at least one moderator input device being adapted to create data structures defining images on the moderator virtual drawing surface that are displayed on the at least one moderator display device and on each of the participant display devices;
 - sending data structures from the moderator workstation to the database on the at least one server and therefrom to the participant workstations for display on the participant display devices; and
 - sending data structures from participant workstations to the database on the at least one server and therefrom to the moderator workstation; and

avoiding collisions by permitting a participant to place a first image on the moderator virtual drawing surface visible to the moderator, the first image having a corresponding image on the participant virtual drawing surface that is not visible to the moderator.

97. The method of claim 75, wherein the plurality of clients includes student workstations and an associated teacher workstation in each of a plurality of classrooms, each workstation connected to the at least one server, whereby multiple classroom sessions may be conducted simultaneously via the server.

98. The method of claim 75, wherein said participant workstations include moderator functionality allowing the participants to add images to the moderator virtual drawing surface, whereby multiple users may concurrently serve as moderators making changes to the content of the moderator virtual drawing surface.

99. The method of claim 75, wherein each participant workstation is programmed to synchronize with an ongoing session by retrieving from the database all moderator images created during the session before the participant joined the session.